

NON-PUBLIC?: N
ACCESSION #: 9306040162
LICENSEE EVENT REPORT (LER)

FACILITY NAME: VOGTLE ELECTRIC GENERATING PLANT - UNIT 1 PAGE: 1
OF 3

DOCKET NUMBER: 05000424

TITLE: REACTOR TRIP DUE TO LOSS OF TURBINE ELECTROHYDRAULIC
CONTROL FLUID PRESSURE
EVENT DATE: 05/03/93 LER #: 93-008-00 REPORT DATE: 05/28/93

OTHER FACILITIES INVOLVED: DOCKET NO: 05000

OPERATING MODE: 1 POWER LEVEL: 98%

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR
SECTION:
50.73(a)(2)(iv)

LICENSEE CONTACT FOR THIS LER:
NAME: MEHDI SHEIBANI, NUCLEAR SAFETY AND TELEPHONE: (706) 826-
3209
COMPLIANCE

COMPONENT FAILURE DESCRIPTION:
CAUSE: B SYSTEM: TG COMPONENT: P MANUFACTURER: A014
REPORTABLE NPRDS: Y

SUPPLEMENTAL REPORT EXPECTED: NO

ABSTRACT:

On May 3, 1993, at 0406 EDT, a turbine/reactor trip occurred due to low electrohydraulic control (EHC) system pressure. The main feedwater (MFW) system isolated and the auxiliary feedwater (AFW) system actuated, as designed. Control room personnel observed the actuations and stabilized the steam generator (SG) water levels. Normal unit operation resumed in Mode 3 (Hot Standby).

The direct cause of this event was a failure of the "A" EHC pump, along with the failure of the standby EHC pump to auto start at the correct pressure. The combination of the two failures prevented the EHC pumps from properly maintaining EHC pressure. The "A" EHC pump pressure compensator was found to intermittently stick in the unloaded condition.

Additionally, the standby pump automatic start pressure switch was out of calibration, causing the pump to start at a pressure lower than required to maintain EHC pressure above the trip setpoint. The defective pump was replaced, and the low EHC pressure standby pump auto start pressure switch was calibrated and adjusted to the correct setpoint.

END OF ABSTRACT

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A. REQUIREMENT FOR REPORT

This report is required per 10 CFR 50.73 (a)(2)(iv) because an unplanned reactor protection system (RPS) actuation occurred as a result of a turbine trip.

B. UNIT STATUS AT TIME OF EVENT

At the time of this event, Unit 1 was operating in Mode 1 (power operation) at 98 percent of rated thermal power. Other than that described herein, there was no inoperable equipment that contributed to the occurrence of this event.

C. DESCRIPTION OF EVENT

On May 3, 1993, at 0406 EDT, control room operators received several alarms from the main turbine's electrohydraulic control (EHC) system. Seconds later, a turbine/reactor trip occurred due to low EHC system pressure. The main feedwater (MFW) system isolated and the auxiliary feedwater (AFW) system actuated, as designed. Control room personnel observed the actuations and stabilized the steam generator (SG) water levels. Normal unit operation resumed in Mode 3 (Hot Standby).

D. CAUSE OF EVENT

The direct cause of this event was a failure of the "A" EHC pump, along with the failure of the standby EHC pump to auto start at the correct pressure. The combination of the two failures prevented the EHC pumps from properly maintaining EHC pressure. The "A" EHC pump pressure compensator was found to intermittently stick in the unloaded condition. A possible cause of this was the introduction of moisture into the system caused by topping off the EHC reservoir from a 55-gallon drum that had previously been contaminated with water. Additionally, the standby pump automatic start pressure switch was out of calibration, causing the pump to start at a pressure lower than required to maintain EHC pressure above the trip setpoint. A contributory cause of this event was improper

adjustment of the low EHC pressure alarm. The improperly adjusted alarm did not alert control room operators to the problem in sufficient time to take corrective actions. This resulted in the standby EHC pump not being started at the correct pressure to prevent a turbine trip due to low EHC pressure.

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E. ANALYSIS OF EVENT

The reactor trip occurred as expected following the turbine trip. The AFW system actuated, and control room personnel responded to restore the unit to normal operation. Based on these considerations, there was no adverse effect on plant safety or on the health and safety of the public as a result of this event.

F. CORRECTIVE ACTIONS

1. The defective EHC pump was replaced, and the EHC system was drained and refilled prior to being restored to service.
2. The low EHC pressure alarm and standby pump autostart pressure switches were calibrated and adjusted to the correct setpoints. A setpoint change was implemented on Unit 1 to increase the low EHC pressure alarm setpoint to 1400 psig to provide control room personnel earlier warning of an EHC pressure problem. A similar setpoint change will be implemented on Unit 2 by July 15, 1993.
3. This event will be reviewed with appropriate personnel to heighten their awareness regarding the use and disposal of storage containers.

G. ADDITIONAL INFORMATION

1. Failed Components:
Pump manufactured by Abex-Denison Corporation
Model # PV09YA-053-31R-04-Y2-S5

2. Previous Similar Events: None

3. Energy Industry Identification System Code:
Turbine Electrohydraulic Control System - TG
Reactor Protection System - JD
Main Feedwater System - SJ
Auxiliary Feedwater System - BA
Main Steam System - SB

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C. K. McCoy Georgia Power
Vice President, Nuclear
Vogtle Project the southern electric system

May 28, 1993

LCV-0017

Docket Nos. 50-424

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D. C. 20555

VOGTLE ELECTRIC GENERATING PLANT
LICENSEE EVENT REPORT
REACTOR TRIP DUE TO LOSS OF TURBINE ELECTROHYDRAULIC
CONTROL FLUID PRESSURE

Gentlemen:

In accordance with the requirements of 10 CFR 50.73, Georgia Power Company submits the enclosed report related to an event which occurred on May 5, 1993.

Sincerely,

C. K. McCoy

CKM/HWM/gmb

Enclosure: LER 50-424/1993-008

xc: Georgia Power Company
Mr. W. B. Shipman
Mr. M. Sheibani
NORMS

U. S. Nuclear Regulatory Commission
Mr. S. D. Ebnetter, Regional Administrator
Mr. D. S. Hood, Licensing Project Manager, NRR
Mr. B. R. Bonser, Senior Resident Inspector, Vogtle

*** END OF DOCUMENT ***
